

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

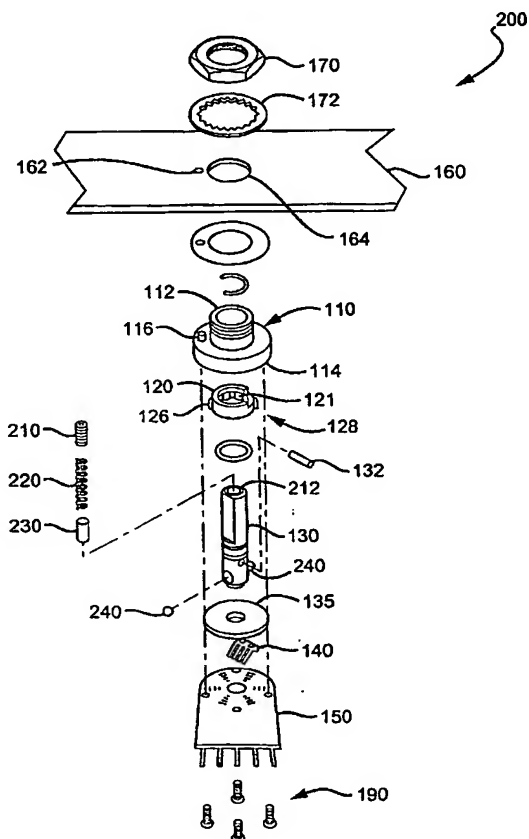
(19) World Intellectual Property  
Organization  
International Bureau(43) International Publication Date  
27 May 2004 (27.05.2004)

PCT

(10) International Publication Number  
**WO 2004/044938 A1**

- (51) International Patent Classification<sup>7</sup>: **H01H 19/00**, 21/00, G05G 5/00
- (21) International Application Number: PCT/US2003/022523
- (22) International Filing Date: 17 July 2003 (17.07.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
PCT/US02/35610  
5 November 2002 (05.11.2002) US
- (71) Applicant (for all designated States except US): **MICRO TEL INTERNATIONAL** [US/US]; 9485 Haven Avenue, Suite 100, Rancho Cucamonga, CA 91730 (US).
- (72) Inventors; and  
(75) Inventors/Applicants (for US only): **HORTON, Donald** [US/US]; 8134 Glade Avenue, Canoga Park, CA 91304 (US). **MILLER, William** [US/US]; 1684 N. Hale Avenue, Fullerton, CA 92831 (US).
- (74) Agents: **RUTAN & TUCKER LLP** et al.; 611 Anton Blvd., Suite 1400, Costa Mesa, CA 92626 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

(54) Title: LOW PROFILE ROTARY SWITCH WITH DETENT IN THE BUSHING

(57) **Abstract:** A panel mounted low profile rotary switch (100) contains a detent mechanism (120) mounted in a bushing (110). In a preferred class of embodiments, the detent sub-assembly comprises a single spring (220) positioned in parallel within the vertical extending shaft (130). The force exerted by the spring is manually adjusted by a set screw (210) to provide the desired downward applied vertical force on a plunger (230). The plunger, preferably a pointed cylinder, applies pressure to detent balls (240) causing the detent balls to move radially outward and engage rotor cams located on the inner surface of the detent mechanism.